

HOBBS OCD

MAR 05 2018

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EOG Resources - Midland

Lea County, NM (NAD 83 NME)

Condor 32 State

#602H

OH

Design: OH

PVA Report

18 December, 2017



PVA Report

Company:	EOG Resources - Midland			Local Co-ordinate Reference:	Well #602H
Project:	Lea County, NM (NAD 83 NME)			TVD Reference:	KB = 25' @ 3340.0usft
Site:	Condor 32 State			MD Reference:	KB = 25' @ 3340.0usft
Well:	#602H			North Reference:	Grid
Wellbore:	OH			Survey Calculation Method:	Minimum Curvature
Design:	OH			Database:	EDM 5000.14

Project				Lea County, NM (NAD 83 NME)	
Map System:	US State Plane 1983	System Datum:	Mean Sea Level		
Geo Datum:	North American Datum 1983				
Map Zone:	New Mexico Eastern Zone				

Site						Condor 32 State	
Site Position:		From:	Map	Northing:	398,890.00 usft	Latitude:	32° 5' 37.669 N
				Easting:	803,604.00 usft	Longitude:	103° 29' 11.148 W
Position Uncertainty:			0.0 usft	Slot Radius:	13-3/16 "	Grid Convergence:	0.45 °

Well								#602H	
Well Position	+N/-S	0.0 usft	Northing:	398,402.00 usft	Latitude:	32° 5' 32.903 N			
	+E/-W	0.0 usft	Easting:	802,790.00 usft	Longitude:	103° 29' 20.654 W			
Position Uncertainty		0.0 usft	Wellhead Elevation:	usft	Ground Level:	3,315.0 usft			

Wellbore							OH	
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)			
	IGRF2015	10/17/2017	6.87	59.95	47,835.04355000			

Design						OH	
Audit Notes:							
Version:	1.0	Phase:	ACTUAL	Tie On Depth:			
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)			
	0.0	0.0	0.0	178.31			



PVA Report

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Site:	Condor 32 State	MD Reference:	KB = 25' @ 3340.0usft
Well:	#602H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey Program		Date 12/18/2017		
From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
205.7	884.0	Inveictus MWD (OH)	MWD	MWD - Standard
974.0	17,175.0	Intrepid MWD (OH)	MWD	MWD - Standard

MD (usft)	Inc (")	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.0	0.0
205.7	0.70	51.44	205.7	0.8	1.0	0.34	0.34	0.00	-1.3	0.0
239.7	0.70	51.44	239.7	1.0	1.3	0.00	0.00	0.00	-1.7	0.0
391.7	0.90	47.44	391.7	2.4	2.9	0.14	0.13	-2.63	-3.8	-0.2
422.7	0.80	54.44	422.7	2.7	3.3	0.46	-0.32	22.58	-4.2	0.3
453.7	0.80	57.44	453.7	3.0	3.6	0.14	0.00	9.68	-4.7	0.5
548.7	1.00	60.44	548.7	3.7	4.9	0.22	0.21	3.16	-6.1	0.8
642.7	0.70	63.44	642.6	4.4	6.1	0.32	-0.32	3.19	-7.4	1.2
736.7	0.70	77.44	736.6	4.8	7.2	0.18	0.00	14.89	-8.1	3.1
884.0	0.90	66.55	883.9	5.4	9.1	0.17	0.14	-7.39	-10.6	1.3
974.0	1.40	67.80	973.9	6.1	10.8	0.56	0.56	1.39	-12.3	1.6
1,159.0	2.20	51.60	1,158.8	9.2	15.7	0.51	0.43	-8.76	-18.0	-2.6
1,344.0	3.30	31.90	1,343.6	15.9	21.3	0.78	0.59	-10.65	-24.5	-9.8
1,530.0	4.00	20.30	1,529.2	26.5	26.4	0.55	0.38	-6.24	-25.3	-18.6
1,716.0	5.00	13.00	1,714.7	40.5	30.4	0.62	0.54	-3.92	-21.5	-25.8
1,903.0	6.00	12.70	1,900.8	58.0	34.4	0.53	0.53	-0.16	-23.3	-29.3
2,090.0	7.10	10.20	2,086.6	78.9	38.6	0.61	0.59	-1.34	-27.2	-33.3
2,278.0	7.20	6.00	2,273.1	102.1	41.9	0.28	0.05	-2.23	-31.8	-37.5
2,466.0	7.90	0.60	2,459.5	126.7	43.3	0.53	0.37	-2.87	-36.5	-41.3
2,654.0	7.30	358.60	2,645.8	151.6	43.1	0.35	-0.32	-1.06	-43.6	-42.3
2,840.0	6.80	1.30	2,830.4	174.4	43.1	0.32	-0.27	1.45	-52.1	-39.8



PVA Report

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 Project: Lea County, NM (NAD 83 NME)
 Site: Condor 32 State
 Well: #602H
 Wellbore: OH
 Design: OH

Local Co-ordinate Reference: Well #602H
 TVD Reference: KB = 25' @ 3340.0usft
 MD Reference: KB = 25' @ 3340.0usft
 North Reference: Grid
 Survey Calculation Method: Minimum Curvature
 Database: EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
3,026.0	5.90	358.40	3,015.3	194.9	43.1	0.51	-0.48	-1.56	-54.5	-42.2	
3,214.0	5.70	4.40	3,202.3	213.9	43.5	0.34	-0.11	3.19	-61.2	-36.2	
3,403.0	5.50	4.60	3,390.4	232.3	45.0	0.11	-0.11	0.11	-63.3	-37.0	
3,589.0	3.80	356.10	3,575.8	247.3	45.2	0.98	-0.91	-4.57	-56.0	-45.9	
3,776.0	4.50	354.00	3,762.3	280.8	44.1	0.38	0.37	-1.12	-51.6	-46.1	
3,964.0	5.50	348.80	3,949.6	277.0	41.5	0.58	0.53	-2.77	-47.6	-47.8	
4,151.0	4.60	1.40	4,135.9	293.3	40.0	0.76	-0.48	6.74	-56.8	-34.5	
4,338.0	4.30	347.60	4,322.3	307.6	38.7	0.59	-0.16	-7.38	-45.4	-45.0	
4,526.0	4.90	347.40	4,509.7	322.3	35.4	0.32	0.32	-0.11	-44.4	-41.3	
4,713.0	4.40	355.60	4,696.1	337.3	33.1	0.44	-0.27	4.39	-48.7	-31.9	
4,901.0	4.00	26.00	4,883.6	350.4	35.4	1.19	-0.21	16.17	-56.0	-6.3	
5,088.0	3.50	48.20	5,070.2	360.0	42.5	0.82	-0.27	11.87	-54.3	5.1	
5,254.0	3.30	44.70	5,235.9	366.8	49.7	0.17	-0.12	-2.11	-51.8	-10.4	
5,442.0	5.40	358.90	5,423.4	379.5	53.3	2.07	1.12	-24.36	-21.7	-47.5	
5,629.0	5.70	356.10	5,609.5	397.6	52.5	0.22	0.16	-1.50	-18.0	-47.3	
5,817.0	5.80	355.20	5,796.6	416.3	51.1	0.07	0.05	-0.48	-16.5	-45.7	
6,005.0	6.20	355.90	5,983.6	435.9	49.6	0.22	0.21	0.37	-17.1	-43.6	
6,191.0	6.20	353.70	6,168.5	455.9	47.7	0.13	0.00	-1.18	-16.2	-42.2	
6,378.0	6.50	351.80	6,354.3	476.5	45.1	0.20	0.16	-1.02	-16.2	-39.9	
6,565.0	6.70	351.20	6,540.1	497.7	41.9	0.11	0.11	-0.32	-18.1	-36.8	
6,752.0	7.10	349.50	6,725.7	519.9	38.2	0.24	0.21	-0.91	-20.3	-33.8	
6,939.0	6.00	336.00	6,911.5	540.1	32.1	1.01	-0.59	-7.22	-15.2	-32.0	
7,126.0	4.00	322.50	7,097.8	554.2	24.1	1.23	-1.07	-7.22	-8.0	-24.8	
7,314.0	1.60	317.00	7,285.6	561.4	18.4	1.28	-1.28	-2.93	-0.5	-12.4	
7,500.0	1.50	319.40	7,471.5	565.1	15.0	0.06	-0.05	1.29	8.5	0.6	
7,688.0	1.40	308.10	7,659.4	568.4	11.6	0.16	-0.05	-6.01	12.7	14.0	
7,874.0	1.40	305.00	7,845.4	571.1	7.9	0.04	0.00	-1.67	9.3	17.4	



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Well:	#602H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey										
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
8,061.0	1.50	296.80	8,032.3	573.5	3.9	0.12	0.05	-4.39	2.0	18.2
8,249.0	1.50	293.40	8,220.3	575.6	-0.6	0.05	0.00	-1.81	-4.0	18.2
8,436.0	1.20	333.30	8,407.2	578.3	-3.7	0.52	-0.16	21.34	4.7	18.1
8,623.0	1.30	345.90	8,594.2	582.1	-5.1	0.16	0.05	6.74	4.5	17.0
8,811.0	1.10	346.80	8,782.1	586.0	-6.0	0.11	-0.11	0.48	0.9	17.0
9,000.0	0.50	37.90	8,971.1	588.4	-5.9	0.46	-0.32	27.04	11.8	11.4
9,187.0	0.30	60.60	9,158.1	589.3	-5.0	0.13	-0.11	12.14	14.0	6.3
9,374.0	0.30	60.80	9,345.1	589.7	-4.1	0.00	0.00	0.11	13.1	6.2
9,561.0	0.70	1.40	9,532.1	591.1	-3.7	0.32	0.21	-31.76	-0.1	14.0
9,749.0	1.20	315.30	9,720.1	593.7	-5.0	0.47	0.27	-24.52	-12.9	8.8
9,936.0	1.00	351.90	9,907.0	596.7	-6.7	0.38	-0.11	19.57	-8.3	16.0
10,123.0	0.50	214.50	10,094.0	597.6	-7.3	0.75	-0.27	-73.48	-4.3	-18.5
10,311.0	0.80	331.00	10,282.0	598.1	-8.4	0.59	0.16	61.97	-15.6	12.8
10,499.0	2.20	300.00	10,470.0	601.0	-12.2	0.83	0.74	-16.49	-24.7	2.3
10,685.0	1.90	268.50	10,655.9	602.8	-18.4	0.62	-0.16	-16.94	-28.4	-12.8
10,872.0	1.70	272.10	10,842.8	602.8	-24.3	0.12	-0.11	1.93	-35.0	-10.8
11,060.0	2.20	323.00	11,030.7	605.8	-29.2	0.92	0.27	27.07	-35.8	22.5
11,248.0	1.00	226.80	11,218.6	607.5	-32.6	1.34	-0.64	-51.17	-19.7	-41.6
11,435.0	1.30	219.90	11,405.6	604.8	-35.1	0.18	0.16	-3.69	-18.3	-43.9
11,623.0	0.60	280.70	11,593.6	603.3	-37.5	0.60	-0.37	32.34	-49.3	-3.5
11,717.0	1.30	317.70	11,687.5	604.2	-38.7	0.95	0.74	39.36	-42.9	27.1
11,792.0	1.70	347.70	11,762.5	605.9	-39.5	1.16	0.53	40.00	-25.5	45.4
11,843.0	1.60	359.60	11,813.5	607.4	-39.6	0.70	-0.20	23.33	-17.0	49.8
11,906.0	0.50	262.60	11,876.5	608.2	-39.9	2.75	-1.75	-153.97	-47.6	-24.6
11,933.0	1.10	222.40	11,903.5	608.0	-40.2	2.92	2.22	-148.89	-19.4	-51.3
11,942.5	1.34	202.30	11,913.0	607.8	-40.3	5.11	2.51	-211.26	0.2	-55.5
KOP (Condor 32 State #602H)										



PVA Report

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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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11,979.0	2.90	172.30	11,949.5	606.5	-40.4	5.11	4.28	-82.22	32.5	-48.3	
12,026.0	10.90	164.30	11,996.1	601.1	-39.0	17.10	17.02	-17.02	44.7	-41.9	
12,072.0	19.40	166.60	12,040.4	589.4	-36.0	18.52	18.48	5.00	46.2	-42.0	
12,119.0	29.30	171.60	12,083.2	570.4	-32.5	21.50	21.06	10.64	42.6	-44.8	
12,165.0	36.00	173.80	12,121.9	545.8	-29.4	14.79	14.57	4.78	38.6	-46.3	
12,212.0	41.00	176.40	12,158.7	516.7	-27.0	11.18	10.64	5.53	33.8	-48.9	
12,259.0	46.50	178.10	12,192.6	484.2	-25.4	11.97	11.70	3.62	29.8	-52.0	
12,306.0	51.60	177.90	12,223.4	448.7	-24.2	10.86	10.85	-0.43	26.9	-55.0	
12,353.0	57.20	177.50	12,250.8	410.6	-22.7	11.93	11.91	-0.85	24.2	-58.2	
12,400.0	65.20	177.90	12,273.4	369.5	-21.0	17.04	17.02	0.85	20.0	-61.7	
12,446.0	72.00	178.20	12,290.2	326.7	-19.6	14.80	14.78	0.65	14.5	-65.6	
12,461.8	73.54	177.21	12,294.9	311.6	-19.0	11.45	9.76	-6.26	12.7	-66.8	
HL Crossing, MD:12461.8', TVD:12294.9', N/S:311.6', E/W:-19.0', INC:73.54											
12,474.9	74.83	176.40	12,298.4	299.0	-18.2	11.45	9.79	-6.17	11.3	-67.7	
FTP (Condor 32 State #602H)											
12,493.0	76.60	175.30	12,302.9	281.5	-17.0	11.45	9.81	-6.09	9.3	-68.7	
12,540.0	81.00	168.00	12,312.0	235.9	-10.3	17.88	9.36	-15.53	5.2	-68.0	
12,587.0	83.70	162.60	12,318.3	190.9	1.6	12.75	5.74	-11.49	1.6	-62.4	
12,641.0	90.60	168.10	12,321.0	138.8	15.2	16.33	12.78	10.19	-3.2	-55.9	
12,687.0	90.60	170.20	12,320.5	93.6	23.8	4.56	0.00	4.57	-4.8	-53.3	
12,734.0	88.80	174.50	12,320.7	47.0	30.1	9.92	-3.83	9.15	-4.9	-52.2	
12,781.0	84.60	176.80	12,323.4	0.3	33.6	10.18	-8.94	4.89	-2.7	-52.6	
12,828.0	85.10	177.30	12,327.7	-46.5	36.1	1.50	1.06	1.06	1.2	-53.0	
12,875.0	87.40	175.80	12,330.7	-93.3	38.9	5.84	4.89	-3.19	4.0	-51.9	
12,921.0	88.00	173.60	12,332.6	-139.1	43.1	4.95	1.30	-4.78	5.5	-48.2	
12,968.0	87.90	173.10	12,334.3	-185.7	48.6	1.08	-0.21	-1.06	6.8	-43.2	
13,062.0	87.10	176.80	12,338.4	-279.2	56.8	4.02	-0.85	3.94	9.9	-35.7	



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Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
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13,155.0	90.10	177.90	12,340.6	-372.1	61.1	3.44	3.23	1.18	11.3	-32.3	
13,248.0	93.00	178.00	12,338.1	-465.0	64.5	3.12	3.12	0.11	8.0	-29.8	
13,341.0	87.60	174.40	12,337.6	-557.7	70.6	6.98	-5.81	-3.87	6.8	-24.5	
13,433.0	89.50	175.40	12,340.0	-649.3	78.8	2.33	2.07	1.09	8.3	-17.1	
13,500.0	91.40	177.30	12,339.4	-716.2	83.1	4.01	2.84	2.84	7.2	-13.5	
13,526.0	91.20	176.90	12,338.8	-742.2	84.4	1.72	-0.77	-1.54	6.4	-12.4	
13,619.0	92.30	177.60	12,336.0	-835.0	88.8	1.40	1.18	0.75	2.7	-8.8	
13,683.0	93.50	179.70	12,332.8	-898.9	90.3	3.78	1.87	3.28	-1.1	-7.9	
13,712.0	94.30	180.10	12,330.8	-927.8	90.4	3.08	2.76	1.38	-3.3	-8.1	
13,806.0	93.60	180.30	12,324.3	-1,021.6	90.1	0.77	-0.74	0.21	-10.6	-9.3	
13,898.0	93.10	181.90	12,318.9	-1,113.4	88.3	1.82	-0.54	1.74	-16.7	-11.9	
13,991.0	90.60	182.50	12,315.9	-1,206.3	84.7	2.76	-2.69	0.65	-20.6	-16.3	
14,054.0	89.20	182.00	12,316.1	-1,269.3	82.3	2.36	-2.22	-0.79	-21.0	-19.3	
14,084.0	89.70	182.50	12,316.3	-1,299.2	81.1	2.36	1.67	1.67	-21.0	-20.7	
14,178.0	87.30	181.00	12,318.8	-1,393.1	78.2	3.01	-2.55	-1.60	-19.3	-24.5	
14,271.0	91.10	178.90	12,320.1	-1,486.1	78.3	4.67	4.09	-2.26	-18.8	-25.2	
14,283.6	90.60	178.67	12,319.9	-1,498.7	78.6	4.38	-3.98	-1.83	-19.1	-25.1	
TGT 1 (Condor 32 State #602H)											
14,364.0	87.40	177.20	12,321.3	-1,579.0	81.4	4.38	-3.98	-1.83	-18.5	-22.9	
14,458.0	87.90	177.80	12,325.2	-1,672.9	85.5	0.83	0.53	0.64	-15.7	-19.7	
14,552.0	90.70	178.90	12,326.3	-1,766.8	88.3	3.20	2.98	1.17	-15.5	-17.8	
14,646.0	89.40	179.20	12,326.2	-1,860.8	89.8	1.42	-1.38	0.32	-16.6	-17.1	
14,740.0	88.10	179.30	12,328.3	-1,954.8	91.0	1.39	-1.38	0.11	-15.6	-16.7	
14,834.0	88.90	180.00	12,330.7	-2,048.7	91.6	1.13	0.85	0.74	-14.1	-17.0	
14,927.0	89.40	180.50	12,332.1	-2,141.7	91.2	0.76	0.54	0.54	-13.7	-18.3	
15,021.0	89.10	181.10	12,333.4	-2,235.7	89.9	0.71	-0.32	0.64	-13.5	-20.4	
15,115.0	88.50	181.40	12,335.3	-2,329.6	87.8	0.71	-0.64	0.32	-12.6	-23.3	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #602H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3340.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3340.0usft
Well:	#602H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

Survey											
MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)	
15,208.0	88.50	179.40	12,337.8	-2,422.6	87.2	2.15	0.00	-2.15	-11.1	-24.8	
15,301.0	88.00	176.90	12,340.6	-2,515.5	90.2	2.74	-0.54	-2.69	-9.2	-22.7	
15,395.0	88.70	177.50	12,343.3	-2,609.4	94.8	0.98	0.74	0.64	-7.5	-18.9	
15,488.0	89.70	176.50	12,344.6	-2,702.2	99.7	1.52	1.08	-1.08	-7.2	-14.9	
15,551.0	90.20	177.40	12,344.7	-2,765.1	103.0	1.63	0.79	1.43	-7.9	-12.1	
15,582.0	88.10	177.40	12,345.1	-2,796.1	104.4	6.77	-6.77	0.00	-7.7	-11.0	
15,675.0	86.90	177.30	12,349.2	-2,888.9	108.7	1.29	-1.29	-0.11	-4.6	-7.6	
15,768.0	88.10	178.50	12,353.2	-2,981.7	112.1	1.82	1.29	1.29	-1.6	-5.0	
15,784.1	88.36	178.83	12,353.7	-2,997.9	112.5	2.63	1.63	2.07	-1.3	-4.8	
TGT 2 (Condor 32 State #602H)											
15,860.0	89.60	180.40	12,355.1	-3,073.7	113.0	2.63	1.63	2.07	-0.8	-4.9	
15,954.0	88.80	179.20	12,356.4	-3,167.7	113.3	1.53	-0.85	-1.28	-0.7	-5.5	
16,047.0	88.30	178.70	12,358.7	-3,260.7	115.0	0.76	-0.54	-0.54	0.6	-4.8	
16,163.0	91.60	176.00	12,358.8	-3,376.5	120.4	3.68	2.84	-2.33	-0.7	-0.3	
16,194.0	96.90	176.00	12,356.6	-3,407.3	122.5	17.10	17.10	0.00	-3.4	1.6	
16,288.0	93.90	178.10	12,347.7	-3,500.8	127.4	3.89	-3.19	2.23	-13.4	5.6	
16,350.0	92.10	177.50	12,344.5	-3,562.6	129.7	3.06	-2.90	-0.97	-17.4	7.4	
16,443.0	89.70	182.00	12,343.0	-3,655.6	130.1	5.48	-2.58	4.84	-20.0	6.9	
16,536.0	88.90	181.80	12,344.1	-3,748.5	127.1	0.89	-0.86	-0.22	-19.9	3.0	
16,630.0	90.10	181.60	12,345.0	-3,842.5	124.3	1.29	1.28	-0.21	-20.3	-0.6	
16,724.0	88.00	180.90	12,346.5	-3,936.5	122.2	2.35	-2.23	-0.74	-19.8	-3.5	
16,817.0	91.60	182.30	12,346.8	-4,029.4	119.6	4.15	3.87	1.51	-20.6	-7.0	
16,911.0	88.70	180.90	12,346.6	-4,123.4	117.0	3.43	-3.09	-1.49	-22.0	-10.5	
17,004.0	89.40	181.70	12,348.1	-4,216.3	114.9	1.14	0.75	0.86	-21.6	-13.4	
17,091.7	90.05	181.33	12,348.6	-4,304.0	112.6	0.86	0.74	-0.43	-22.3	-16.5	
HL Crossing, MD:17091.7", TVD:12348.6", N/S: -4304.0", E/W:112.6", INC:90.05											
17,098.0	90.10	181.30	12,348.5	-4,310.3	112.4	0.86	0.74	-0.43	-22.3	-16.7	



PVA Report

Company:	EOG Resources - Midland	Local Co-ordinate Reference:	Well #602H
Project:	Lea County, NM (NAD 83 NME)	TVD Reference:	KB = 25' @ 3340.0usft
Site:	Condor 32 State	MD Reference:	KB = 25' @ 3340.0usft
Well:	#602H	North Reference:	Grid
Wellbore:	OH	Survey Calculation Method:	Minimum Curvature
Design:	OH	Database:	EDM 5000.14

MD (usft)	Inc (°)	Azi (grid_north_azim)	TVD (usft)	N/S (usft)	E/W (usft)	DLeg (°/100usft)	Build (°/100usft)	Turn (°/100usft)	High to Plan (usft)	Right to Plan (usft)
17,117.0	90.60	181.50	12,348.4	-4,329.3	112.0	2.83	2.63	1.05	-22.7	-17.4
Final MWD Survey (MD= 17117.0')										
17,175.0	90.60	181.50	12,347.8	-4,387.3	110.4	0.00	0.00	0.00	-24.0	-19.4
Final Bit Projection (MD= 17175.0') - PBHL (Condor 32 State #602H)										

Design Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
12,461.8	12,294.9	311.6	-19.0	HL Crossing, MD:12461.8', TVD:12294.9', N/S:311.6', E/W:-19.0', INC:73.54
17,091.7	12,348.6	-4,304.0	112.6	HL Crossing, MD:17091.7', TVD:12348.6', N/S:-4304.0', E/W:112.6', INC:90.05
17,117.0	12,348.4	-4,329.3	112.0	Final MWD Survey (MD= 17117.0')
17,175.0	12,347.8	-4,387.3	110.4	Final Bit Projection (MD= 17175.0')

Checked By: _____ Approved By: _____ Date: _____



Lea County, NM (NAD 83 NME)

Condor 32 State #602H

Plan #2

PROJECT DETAILS: Lea County, NM (NAD 83 NME)

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Eastern Zone
System Datum: Mean Sea Level

WELL DETAILS: #602H

KB = 25' @ 3340.0usft 3315.0
Northing 398402.00 Easting 802790.00 Latitude 32° 5' 32.903 N Longitude 103° 29' 20.654 W

Azimuths to Grid North
True North: -0.45°
Magnetic North: 6.42°

Magnetic Field
Strength: 47835.0nT
Dip Angle: 59.55°
Date: 10/17/2017
Model: IGRF2015

To convert a Magnetic Direction to a Grid Direction, Add 6.42°
To convert a Magnetic Direction to a True Direction, Add 6.87° East
To convert a True Direction to a Grid Direction, Subtract 0.45°

SECTION DETAILS

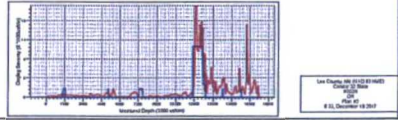
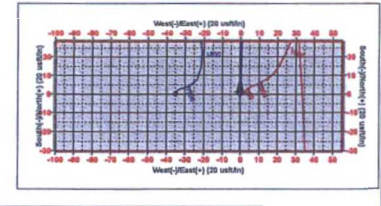
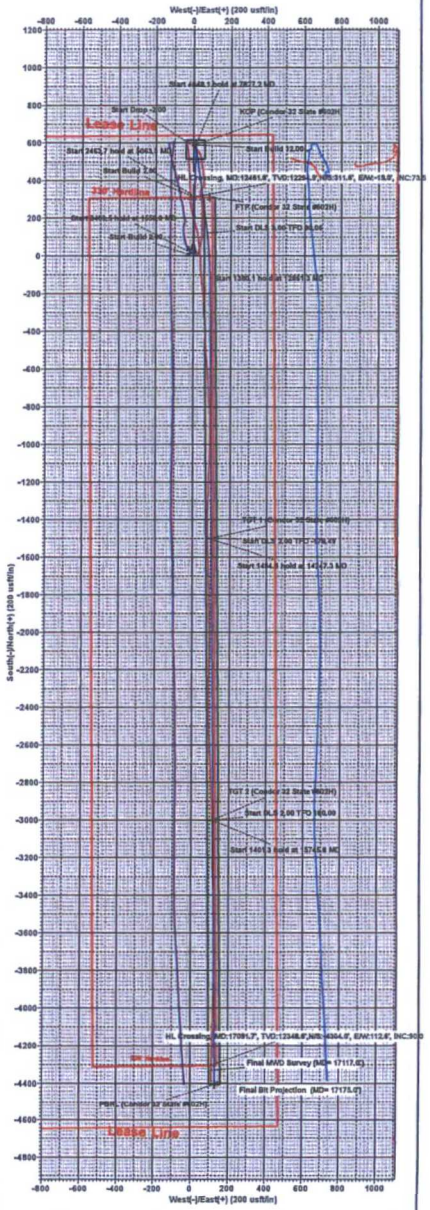
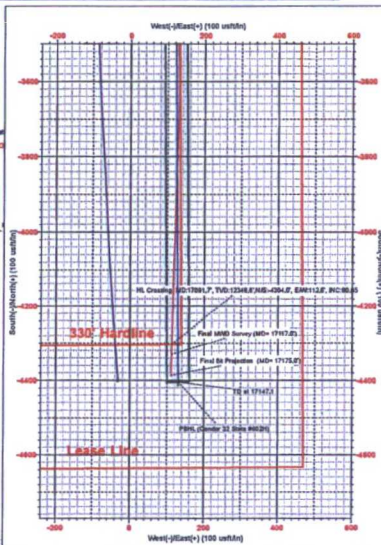
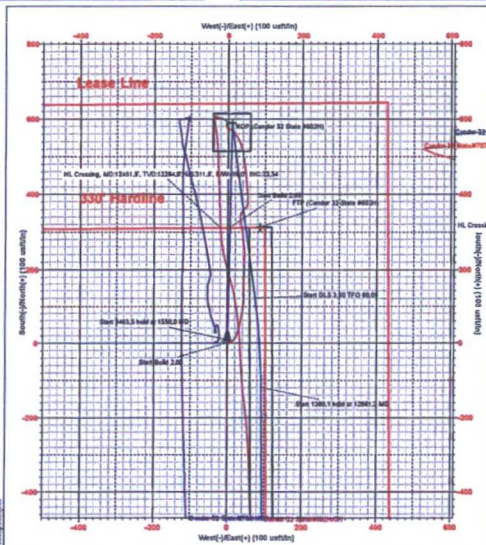
Sec	MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	1300.0	0.00	0.00	1300.0	0.0	0.0	0.00	0.00	0.0	
3	1550.0	5.00	1.00	1549.7	10.9	0.2	2.00	1.00	-10.9	
4	5013.5	5.00	1.00	5000.0	312.7	5.5	0.00	0.00	-312.4	
5	5063.5	6.00	1.00	5049.8	317.5	5.5	2.00	0.00	-317.2	
6	7527.2	6.00	1.00	7500.0	575.0	10.0	0.00	0.00	-574.5	
7	7827.2	0.00	0.00	7799.5	590.7	10.3	2.00	180.00	-590.1	
8	11875.4	0.00	0.00	11847.6	590.7	10.3	0.00	0.00	-590.1	
9	12621.3	89.51	172.28	12325.0	121.6	73.9	12.00	172.28	-119.4	
10	12861.3	89.51	179.48	12327.1	-117.6	91.1	3.00	90.06	120.3	
11	14241.4	89.51	179.48	12339.0	-1497.6	103.6	0.00	0.00	1500.0	TGT 1 (Condor 32 State #602H)
12	14247.3	89.39	179.48	12339.1	-1503.5	103.7	2.00	-179.49	1505.9	TGT 2 (Condor 32 State #602H)
13	15741.7	89.39	179.48	12355.0	-2997.8	117.2	0.00	0.00	3000.0	
14	15745.8	89.31	179.48	12355.0	-3001.9	117.3	2.00	180.00	3004.1	
15	17147.1	89.31	179.48	12372.0	-4403.0	130.0	0.00	0.00	4404.9	PBHL (Condor 32 State #602H)

CASING DETAILS

No casing data is available

WELLBORE TARGET DETAILS (MAP CO-ORDINATES)

Name	TVD	+N-S	+E-W	Northing	Easting
KCP (Condor 32 State #602H)	11912.4	890.7	10.3	398992.69	802800.51
FTP (Condor 32 State #602H)	12335.0	313.0	87.0	398715.00	802877.00
TGT 1 (Condor 32 State #602H)	12339.0	-1497.6	103.6	396904.40	802893.53
TGT 2 (Condor 32 State #602H)	12335.0	-2997.8	117.2	395404.20	802907.25
PBHL (Condor 32 State #602H)	12372.0	-4403.0	130.0	393999.00	802926.00



Lea County, NM (NAD 83 NME)
Condor 32 State #602H
Plan #2
10/17/2017